

WHAT IS CLAIMED IS:

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1. A method for controlling a hand-off of an MS (Mobile Station) for home zone service in a mobile telecommunications system, comprising the steps of:

5 (a) establishing a call connection between said MS and a BTS (Base Transceiver Station) providing the home zone service;

(b) requesting a BSC (Base Station Controller) to make the hand-off to a hand-off targeted BTS via said BTS;

10 (c) causing said BSC to determine whether said hand-off targeted BTS belongs to the home zone service;

(d) performing the hand-off of said MS to said hand-off targeted BTS if said hand-off targeted BTS belongs to the home zone service;

(e) determining whether said MS is registered to be used only in the home zone service if said hand-off targeted BTS does not belong to the home zone service;

15 (f) dropping said call connection if said hand-off targeted BTS does not belong to the home zone service and if said MS is registered to be used only in the home zone service; and,

(g) performing the hand-off of said MS to said hand-off targeted BTS if said hand-off targeted BTS does not belong to the home zone service and said MS is registered to be
20 used both in the home zone service and a non-home zone service.

2. The method as defined in Claim 1, wherein the step (a) of establishing said call

connection further includes the steps of:

(h) causing said BSC to request the home zone information of said MS from a MSC (Mobile Switching Center) in response to a request to establish said call connection between said MS and said BTS;

5 (i) causing said MSC to send the home zone information to said BSC; and,

(j) storing the home zone information into said BSC.

3. The method as defined in Claim 2, wherein the home zone information includes a home zone list having a plurality of BTSs providing the home zone service to said MS and
10 a subscriber class information specifying whether said MS is registered to be used the non-home zone service.

4. The method as defined in Claim 2, wherein the step (i) of sending the home zone information from said MS to said BSC is achieved through a call proceeding message.

15 5. The method as defined in Claim 2, wherein the home zone information is stored in a database.

6. The method as defined in Claim 5, wherein the database is stored in an LRS
20 (Location Registration System).

7. The method as defined in Claim 3, wherein the step (c) of determining whether

said hand-off targeted BTS belongs to the home zone service is performed by determining whether said hand-off targeted BTS is included in the home zone list.

8. The method as defined in Claim 3, wherein the step (e) of determining whether said MS is registered to be used only in the home zone is determined based on the subscriber class information of said MS.

9. The method as defined in Claim 1, wherein the step (f) of dropping said call connection further includes the steps of sending a BTS acknowledging signal to said MS, sending a warning message to said MS, and causing said MS to output said warning message to inform the subscriber of said MS.

10. The method as defined in Claim 9, wherein said warning message comprises either one of visual characters, tones, and flash light.

11. A method for controlling a hand-off of a mobile station (MS) for home zone service in a mobile telecommunications system including a plurality of base transceiver stations (BTSSs), a base station controller (BSC) for controlling said BTSSs, and a mobile switching center (MSC) for connecting said BSC with one BTS to another BTS or another network, the method comprising the steps of:

(a) causing said MS to connect a communication channel with said BSC via said another BTS in response to either one of an outgoing call and an incoming call;

(b) causing said BSC to store a home zone list and a subscriber service class information of said MS received from said MSC; and,

(c) causing said BSC to selectively perform the hand-off requested by said MS according to the home zone list and the subscriber service class information.

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12. The method as defined in Claim 11, wherein the method further comprises the step of dropping said communication channel if said another BTS is not included in the home zone list and if said MS is registered to be used only in the home zone service.

10 13. The method as defined in Claim 12, wherein the step of dropping said communication channel comprises the step of sending an attention message to said MS and causing said MS to output said attention message to inform the subscriber of said MS.

15 14. The method as defined in Claim 13, wherein said attention message comprises either one of visual characters, tones, and flash light.

15. The method as defined in Claim 11, wherein the hand-off is performed if said another BTS is included in the home zone list.

20 16. The method as defined in Claim 11, wherein the hand-off is performed if the subscriber class information specifies that said MS registered to be used both in the home zone service and a non-home zone service.